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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHAND, ROBERTA A

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/646,340	Applicant(s) LIAW ET AL.	
	Examiner Roberta A. Shand	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 18 contains non-statutory language: “computer-program-product“. This claim does not define any structural or functional interrelationships between the data structures and other claimed aspects of the invention which permit the data structure’s functionality to be realized *see Interim Guidelines pp52-54*.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann (U.S. 5905873) in view of Kamo (U.S. 5610918).

1. Regarding claim 1, Hartmann teaches a method of processing a packet comprising: receiving the packet; translating the packet from a first protocol-specific format (fig. 7b, input packet format) to a canonical packet format (col. 3, lines 17-26, Hartmann teaches converting

Art Unit: 2616

packets to a generic format); translating the packet from the canonical packet format (generic format) to a second protocol-specific format (fig. 7b, output packet format); and forwarding the packet (abstract).

2. Hartmann does not teach the canonical packet format has a fixed length and is a generic format that can represent multiple protocol specific formats.

3. Kamo teaches (fig. 1 and col. 16, lines 15-39) converting data from frame relay to ATM (fixed length) and from ATM to Frame relay. ATM is a fixed length protocol that allows multiple protocol packets to be exchanged. It would have been obvious to one of ordinary skill in the art to adapt this to Hartman's system to allow for multiple format packets to be exchanged (abstract)

4. Regarding claim 3, Hartmann teaches (fig. 8) the translating is performed in a network device.

5. Regarding claim 4, Hartmann teaches (fig. 7b) the translating is performed in a network switch.

6. Regarding claim 5, Kamo teaches (fig. 1) the translating is performed in a network switch that includes a pooling switch.

7. Regarding claim 6, Kamo teaches (fig. 1, frame relay) the first and second protocol-specific formats are the same.

Art Unit: 2616

8. Regarding claim 7, Hartmann teaches (col. 15, line 60 – col. 16, line 12) translating includes copying protocol-specific fields from the packet in the first protocol-specific format.

9. Regarding claim 8, Hartmann teaches (col. 15, line 60 – col. 16, line 12) translating includes copying protocol-specific fields from the packet in the first protocol-specific format to protocol-specific fields in the packet in the canonical packet format.

10. Regarding claim 9, Hartmann teaches (col. 15, line 60 – col. 16, line 12) translating includes copying general fields from the packet in the first protocol-specific format.

11. Regarding claim 10, Hartmann teaches (col. 15, line 60 – col. 16, line 12) translating includes copying multiple protocol-specific fields from the packet in the first protocol-specific format.

12. Regarding claim 11, Hartmann teaches (col. 15, line 60 – col. 16, line 12) translating includes copying protocol-specific fields from the packet in the first protocol-specific format to common fields in the packet in the canonical packet format.

13. Regarding claim 12, Hartmann teaches (col. 15, line 60 – col. 16, line 12) copying protocol-specific fields from the packet in the first protocol-specific format to protocol-specific fields in the packet in the canonical packet format; copying general fields from the packet in the first protocol-specific format to general fields in the packet in the canonical packet format; and

Art Unit: 2616

copying common fields from the packet in the first protocol-specific format to common fields in the packet in the canonical packet format (It is inherent in Hartmann's system that copying takes place in order to convert the generic packet format back to the original protocol).

14. Regarding claim 13, Hartmann teaches (figs. 7b and 8) the translating is performed in a network device; translating the packet from the first protocol-specific format to the canonical packet format occurs during data ingress; and translating the packet from the canonical packet format to the second protocol-specific format occurs during data egress.

15. Regarding claim 14, Hartmann teaches (col. 3, lines 17-26) a network device for processing a packet comprising: an ingress interface for receiving the packet (fig. 7b, input packet format); an ingress processing engine configured to translate a packet from a first protocol-specific format to a canonical packet format (col. 3, lines 17-26, Hartmann teaches converting to a generic packet format.); an egress processing engine (output packet format) configured to translate the packet from the canonical packet format to a second protocol-specific format; and an egress interface for forwarding the packet fig. 7b).

16. Hartmann does not teach the canonical packet format has a fixed length and is a generic format that can represent multiple protocol specific formats.

17. Kamo teaches (fig. 1 and col. 16, lines 15-39) converting data from frame relay to ATM (fixed length) and from ATM to Frame relay. ATM is a fixed length protocol that allows multiple protocol packets to be exchanged. It would have been obvious to one of ordinary skill

Art Unit: 2616

in the art to adapt this to Hartman's system to allow for multiple format packets to be exchanged
(abstract)

18. Regarding claim 15, Hartmann teaches (fig. 6) the ingress and egress interfaces are the same physical interface Hartmann teaches in fig. 6 that the crossbar is single sided so the protocol converters are both input and output devices.

19. Regarding claim 16, Hartmann teaches (fig. 8) the ingress and egress processing engines are implemented on a single physical processor.

20. Regarding claim 17, Hartmann teaches (col. 3, lines 17-26) at least one field of the canonical packet format is shared by multiple protocols.

21. Regarding claim 18, Hartmann teaches (col. 3, lines 17-26) a computer program product for processing a packet, the computer program product being embodied in a computer readable medium and comprising computer instructions for: receiving the packet (fig. 7b, input packet format); translating the packet from a first protocol-specific format to a canonical packet format (col. 3, lines 17-26, Hartmann teaches converting to generic packet format.) translating the packet from the canonical packet format to a second protocol-specific format (fig. 7b, output packet format); and forwarding the packet (fig. 7b).

22. Hartmann does not teach the canonical packet format has a fixed length and is a generic format that can represent multiple protocol specific formats.

Art Unit: 2616

23. Kamo teaches (fig. 1 and col. 16, lines 15-39) converting data from frame relay to ATM (fixed length) and from ATM to Frame relay. ATM is a fixed length protocol that allows multiple protocol packets to be exchanged. It would have been obvious to one of ordinary skill in the art to adapt this to Hartman's system to allow for multiple format packets to be exchanged (abstract)

Response to Arguments

24. Applicant's arguments with respect to claims 1 and 3-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A. Shand whose telephone number is 571-272-3161.

The examiner can normally be reached on M-F 9:00am-5:30pm.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Roberta A Shand
Examiner
Art Unit 2616

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616